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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,430	09/11/2003	Kenichi Takada	0666.1740001	4090

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STERNE, KESSLER, GOLDSTEIN & FOX PLLC  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/659,430

Applicant(s)

TAKADA ET AL.

Examiner

F. Daniel Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on March 15, 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

Applicant's arguments filed March 15, 2005, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 24-30 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the added limitations concerning the charge pump.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

Claims 24-30 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

In claim 24 line 13 "pump engages with said first end of said input shaft" is wrong, since fig 3 clearly shows the pump (11) engaging a middle portion of the input shaft (12).

In claim 27 line 2-3 and claim 29 line 2-3 "said hydraulic piston...is made integral with said center section" is wrong, since the piston slides within the center section (84). If claims 27 and 29 are corrected to claim only the control valve being integral with the center section, then claim 29 will not further limit claim 27. If claims 27 and/or 29 are corrected to claim the control valve and the piston beign somehow connected to the center section, then claim 30 will not further limit claim 29, sicne the center section is in the housing.

Claims not specifically mentioned are indefinite, since they depend from one of the above claims.

***Claim Rejections - 35 USC 103***

Claims 24-26, inasmuch as they are definite, are rejected under 35 U.S.C. 103 as being unpatentable over Takada et al in view of Hann. Takada et al discloses an axle driving apparatus comprising a center section (5) in a housing (1, 2) and providing a closed fluid circuit for a variable displacement pump (P) having a movable swash plate (8) and a motor (M); input shaft (3) and axle driving the pump and being driven by the motor, respectively; a charge pump (11) supported by and located in the housing, being driven by a second end of the input shaft, and supplying fluid from a sump formed by the housing, but does not disclose that there is a hydraulic actuator for tilt operating the swash plate, being disposed within the housing and being supplied fluid by the charge pump, wherein the actuator includes a hydraulic piston having a location controlled by a manually controlled control valve.

Hann teaches, for an axle driving apparatus comprising a closed fluid circuit for a variable displacement pump (14) having a movable swash plate (26) and a motor (16); input shaft (22) and axle driving the pump and being driven by the motor, respectively; a charge pump (46) supplying fluid from a sump (48), wherein the pump is disposed within a housing (case); that there is a hydraulic actuator (30, 32) for tilt operating the swash plate, being disposed within the housing and being supplied fluid by the charge pump, wherein the actuator includes a hydraulic piston (38, 40) having a location controlled by a manually controlled control valve (82), as is well known (e.g. column 1 line 13-16).

Since Takada et al and Hann are both from the same field of endeavor, the purpose disclosed by Hann would have been recognized in the pertinent art of Takada et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use a hydraulic actuator for tilt operating the swash plate of Takada et al, wherein the actuator is disposed within the housing, is supplied fluid by the charge pump, and includes a hydraulic piston having a location controlled by a manually controlled control valve, as taught by Hann, as a matter of engineering expediency.

Claims 27-30, inasmuch as they are definite, are rejected under 35 U.S.C. 103 as being unpatentable over Takada et al in view of Hann, as applied to claim 26 above, and further in view of Froebe. The modified Takada et al discloses all of the elements of claims 27-30, but does not disclose that the control valve is made integral with the center section.

Froebe teaches, for a an axle driving apparatus comprising a center section (28) in a housing (17) and providing a closed fluid circuit for a variable displacement pump (12) having a movable swash plate (41) and a motor (13); a hydraulic actuator (73) for tilt operating the swash plate, being disposed within the housing, wherein the actuator includes a hydraulic piston (76) having a location controlled by a manually controlled control valve (78); that the control valve is made integral with the center section (by the pipe connecting the actuator to the pressure source, via 37).

Since Takada et al and Froebe are both from the same field of endeavor, the purpose disclosed by Froebe would have been recognized in the pertinent art of Takada et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to made the control valve of the modified Takada et al integral with the center section, as taught by Froebe, as a matter of engineering expediency.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

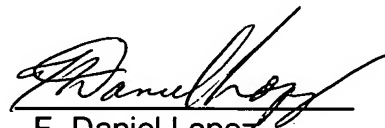
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is (703) 872-9302. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

A handwritten signature in black ink, appearing to read "F. Daniel Lopez", with a stylized flourish at the end.

F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
May 26, 2005